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## How Build Your Own Rain Barrel

### Materials & Tools

- Safety glasses
- 55 gallon plastic barrel (Food grade barrels recommended)
- 4' atrium grate
- Flexible downspout hose or diverter
- Window screen mesh
- Spigot (3/4") (hose bib, silcock, y valve, or other valve to let water out)
- Teflon tape (plumber's tape?)
- PVC for overflow (1 1/2")
  - 90° Elbow (female threaded)
  - Pipe adapter (male threaded)
  - X' length of PVC pipe
- Hose Clamps
- Jig saw and blade
- Drill and bit large enough to create a hole the saw blade can fit into.
  - Optional- 1" and 1 7/8" to 2" hole saw bits

### Disclaimer

Talking Point: When working with power tools, be sure to follow proper safety procedures. Always wear safety glasses and keep fingers clear of all sharps blades and bits.

## Inlet

- Cut hole in top for 4" atrium grate.
  - Use the atrium grate and trace around the outside of the grate to create an outline.
  - Drill starter hole big enough to accept blade you will be using to cut the opening (if necessary). Cut out the hole for the atrium grate using a jig saw or other cutting instrument.
- Insert grate to check size.

## Outlet/ Spigot

- Spigot should be placed as close to bottom of barrel as possible with enough room to hook up a hose or fill a watering can.
- Drill a hole at desired location near the bottom of the barrel using a 1-inch drill bit or trace around the spigot and cut a hole with jig saw.
- Thread a  $\frac{3}{4}$  inch spigot into hole and unscrew (will cut threads into the hole).
- Wrap the spigot with Teflon tape and screw into the outlet hole.
- Optional- apply silicone chalk on the outside of the barrel where the spigot is screwed in.

## Overflow

- An overflow is necessary to give the water an escape route when barrel is full so it doesn't back up into downspout or flow over top of barrel. Direct away from building foundations.
- Cut a 1 7/8 to 2 inch hole near the top of the barrel.
  - Drill hole with a 1 7/8 inch hole saw or trace an outline near the top of the barrel along the inside edge of the non-threaded end on the pipe adapter drill a starter hole inside the outline and cut hole using a jig saw.
- Using the hole cut for the inlet insert the threaded end of the pipe adapter through the over flow hole.
- Place a bead of silicone caulk along the edge of the overflow hole on the outside of the barrel.

- Thread the 90°Elbow onto the pipe adapter (PVC cement optional).
- Measure and cut PVC pipe to the desired length for the overflow (size of barrel plus height of stand).

Optional- attach a 90°Elbow to the bottom of the overflow pipe and additional length of pipe to direct water away from foundation.

## Installing Your Rain Barrel

### Barrel Placement

- Roof catchment area (bigger the area, more barrels needed to capture water, if desired).
- Can link several barrels together to collect more water.

### Base/Stand

- Determine desired height for clearance from the ground.
  - Additional height increases pressure to drain barrel.
- Needs to be able to support 450 lbs.
  - Can buy pre-made stands or build your own out of wood, cinder blocks, retaining wall blocks, pavers, etc.
- Needs to be level- don't want your barrel to fall over especially when full.

### Downspout Modification

- Place barrel on stand at desired location and mark existing downspout where you wish to cut depending on method you are using to direct water to rainbarrel (flexible downspout hose in this example).
  - Use tin snips to cut to desired length.
- Connect flexible downspout hose to the downspout.
  - Optional- apply a thin bead of silicone caulk along the edge of the inlet opening to create a seal around the flange of the atrium grate.

- Optional - cut a 1' x 1' square of window screen and place it inside the atrium grate and fold excess over the edge of the atrium grate. Trim screen (if desired).
  - Screen will keep smaller debris out and mosquitoes of the barrel.
  - Will need to be cleaned out regularly.
- Attach the flexible downspout hose to the atrium grate with a 4" hose clamp.

And now you've made and installed your own rain barrel!